

9ix St. School, Worcester, Mass.

March 9, 1888.

Daniel M. Fox,

Superintendent U. S. Mint,

Philadelphia, Pa.

Dear Sir:-

Will you kindly answer for me the following questions so far as your observations enables you to do so? Do the metals copper, silver, & gold expand in passing from the liquid to the solid state; and will the solid metal, when cast, float in the liquid metal?

I shall be greatly obliged for answers to the above questions. I wish, if possible, to use the answers

March 15.

They contract in passing to the solid state

Respectfully,

James Ben Knies,

Principal,

5-a Providence St., Worcester, Mass.



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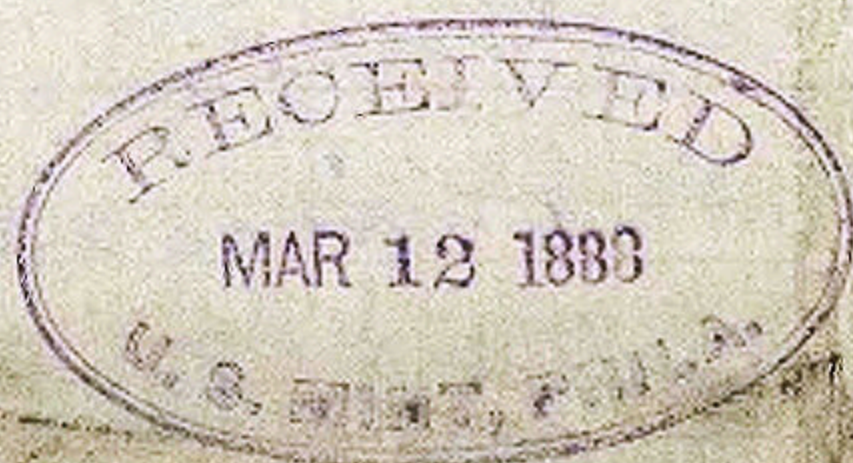
Worcester, Mass.

March. 9. 1888.

James Jenkins.

Inquirer if Metals Copper  
Silver & Gold expand  
in passing from liquid  
to solid state: & whether  
Solid Metal when cast  
float in liquid Metal;

Copy of  
to the solid state





Copper, Silver, and Gold  
contract in passing from  
the liquid to solid state.  
The specific gravity of the  
solid metal must therefore  
be greater than the fluid  
(~~molten~~ melted), consequently  
the solid metal will sink  
in the liquid metal



NARA RG104, Entry 1, Box 150

[Abstract:] Inquires if metals copper silver & gold expand in passing from liquid to solid state...

Six St. School, Worcester, Mass.

March 9, 1888

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Respectfully,  
James Jenkins,  
Principle  
59 Providence St., Worcester, Mass.

[Noted in margins:]

They contract in passing to the solid state.

[Enclosed note:]

Copper, Silver, and Gold contract in passing from the liquid to solid state. The specific gravity of the solid metal must therefore be greater than the fluid (melted), consequently the solid metal will sink in the liquid metal.